



PRIVY COUNCIL

MEDICAL RESEARCH COUNCIL
NATIONAL INSTITUTE FOR MEDICAL RESEARCH

THE RIDGEWAY · MILL HILL · LONDON, N.W.7.

Cables: NATINMED MILL, LONDON.

22 July, 1957

Dear Sol,

Very many thanks for your most interesting letter of July 17. I am particularly fascinated by this "protein molecule of a peculiar nature" which is synthesized alongside RNA and its resistance to inhibition by chloramphenicol. At first sight, this seems possibly to fit in with some recent work I have been doing on penicillinase precursors, ~~making~~ some not unreasonable but at the moment quite unverifiable assumptions. We find that the maximum amount of penicillinase precursor present in the cells is equivalent to one molecule of penicillinase for each enzyme-forming site. I am going forward at the moment on the hypothesis that this precursor may represent the embryonic penicillinase whilst it is in combination with the RNA template (or other enzyme-forming "organizer"). Our other news mainly concerns protein turnover in E. coli and B. cereus, which I think we can say has now been placed on a very firm quantitative footing, largely due to Mandelstam's recent work, some of which you have probably seen.

The Kramer phenomenon is one of the most exciting and exasperating I have ever met. On occasions we have managed to increase the effect a thousand-fold ~~from~~ ^{to} that which Kramer originally reported from Budapest. The most sensational result hitherto has been the formation in 10 minutes of an amount of penicillinase equivalent to not less than 10% of the dry weight of the cells which did the trick. ~~We~~ ^{plus} are however still quite uncertain of the origin of the enzyme in this ~~formation~~ ^{plus formation} and more tantalizingly still, the phenomenon itself is quite unreproducible - in the sense that we never know from one day to another whether it is going to work or not. There are obviously some extremely critical and subtle conditions which at the moment we certainly have not got a clue about. Kramer himself now refuses to work on the phenomenon and I am beginning to resign myself to having to spend up to two years worrying it out.

I am planning to fly direct from San Francisco to St. Louis (if possible) round about November 10 in order to stay with Mel and Ruby for two or three days. I then hope to go straight to Urbana from which perhaps I may be able to make excursions to both Chicago and Bloomington if there is time. I shall then go on to Madison to stay with Harlyn for a couple of days and go on direct from there to New York on or around November 20. It does not look as though I shall have time to visit Cleveland or Rochester, though I should like to. I shall probably have Jean with me part of the time since she plans to fly West to meet me round about November 12. I hear from Harlyn that you may be coming to Japan for the Enzyme Symposium,

Contd:

in which case we shall meet and can discuss any detailed plans there.

With best wishes,

yours sincerely,

Martin

M.R. Pollock.

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Sender's name and address:—

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BY AIR MAIL

AIR LETTER

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